

Energy Policy and Development Centre – Scientific Session

Presentation by Prof. Peter Braesicke, Chair of ECRA

9th October 2020

Online, from Eggenstein-Leopoldshafen, Germany

19th October 2020 Peter Braesicke - Stratospheric Ozone and Climate

Professor in Karlsruhe (KIT)

PostDoc in Cambridge/UK

Senior Research Associate

Introducing myself

- Theoretical atmospheric physics
- Section head modelling / acting head IMK-ASF
- Scientific coordinator REKLIM: https://www.reklim.de/
- ECRA Chair: <u>http://www.ecra-climate.eu/</u>

Diploma in Meteorology (TU/FU Berlin)

Co-Coordinator: Helmholtz RF E&E DataHub

https://www.helmholtz.de/en/research/earth and environment/initiatives/

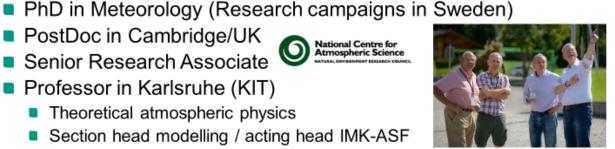
Who I am



IMK-ASF, Division IV

zone

researc



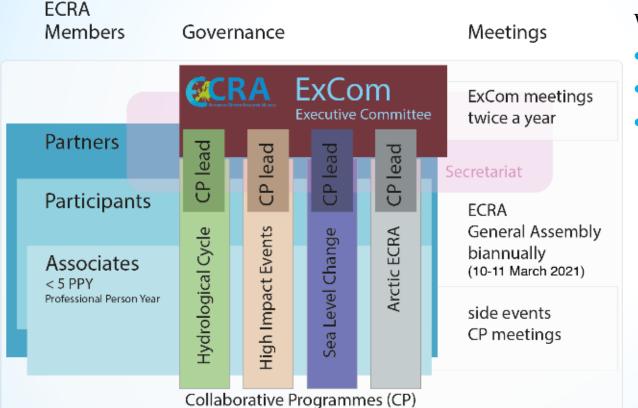
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Who we are



We are

- A bottom-up
- Network of
- Research performing organizations

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Graphic from Hoke, W. et al.: The European Climate Research Alliance (ECRA): Collaboration from bottom-up, Adv. Geosci., 46, 1-10, https://doi.org/10.5194/adgeo-46-1-2019, 2019.



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What we are



ECRA Members

Partners

Participants

Associates

< 5 PPY Professional Person Year

ECRA is structured by **Collaborative Programs**

- Arctic (Polar) ECRA
- Sea Level Change
- High Impact Events
- Hydrological Cycle

CP lea

9

Hydrological Cycle



Graphic from Hoke. W. et al.: The European Climate Research Alliance (ECRA): Collaboration from bottom-up, Adv. Geosci., 46, 1-10, https://doi.org/10.5194/adgeo-46-1-2019, 2019.



Thematic perspective

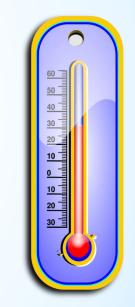
- Shaped through Partners, Participants and Associates (Who)
- Shaped through the structure of ECRA currently four CPs and the ExCom / Secretariat (What)
- Pillar 1: Infrastructures
- Pillar 2a: Global Challenges and
- Pillar 2b: European Industrial Competitiveness
- Pillar 3: Curiosity Driven Blue Skies Research





Infrastructures

- Multidisciplinary Observatories (MOs) linking Atmosphere, Ocean, Land and Ecosystems in Climate Hot Spots
 - Mediterranean Region
 - Mountain Regions
 - Coastal Regions
 - Tropical/Polar Regions
 - Many more ...
- Remote Sensing from Space ("limb sounding gap")
 - Also a kind of observatory ...
 - Spatial coverage in conjunction to comprehensive local MOs
- Simulation Environments (models and data on HPC)



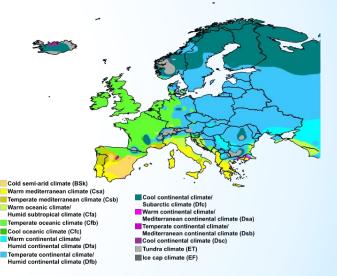


- Climate⁽¹⁾, Energy⁽²⁾ and Mobility⁽³⁾ monitoring, process understanding, (regional) projections and how changes in 2 and 3 benefit 1
- Food, Bioeconomy, Natural Resources, Agriculture and Environment - in a changing climate
- Health in a changing climate, including AQ and handling of extreme events

Global Challenges

Europe map of Köppen climate classification







Competitiveness

- Digital, Industry and Space for climate change
 - Monitoring (see infrastructures)
 - Simulations (see infrastructures)
 - Merging Data and Models
 - Prerequisite: HPC and storage
 - Data specialists
 - Software as infrastructure





Blue Skies





Outreach and Societal Relevance

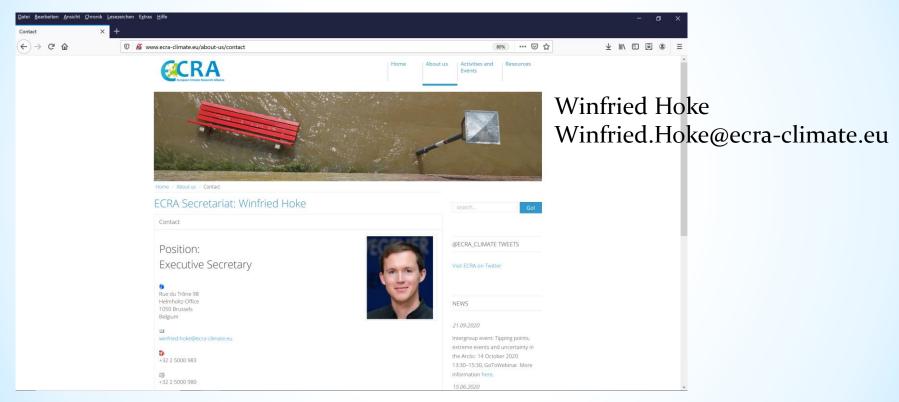
- H2020 Proposal ASTERISKS
 - Lead by FMI
 - Focus on AI for climate srevices
 - Outreach component via ECRA
- Outreach by partners
 - E.g. REKLIM in Germany (Helmholtz)



https://www.reklim.de/en/knowledge-transfer/information-products/reklim-anniversary-magazin/ slide 2 | 9th Oct 2020



Contact





Upcoming General Assembly 2021

- Save the date! and
- Please join us!



